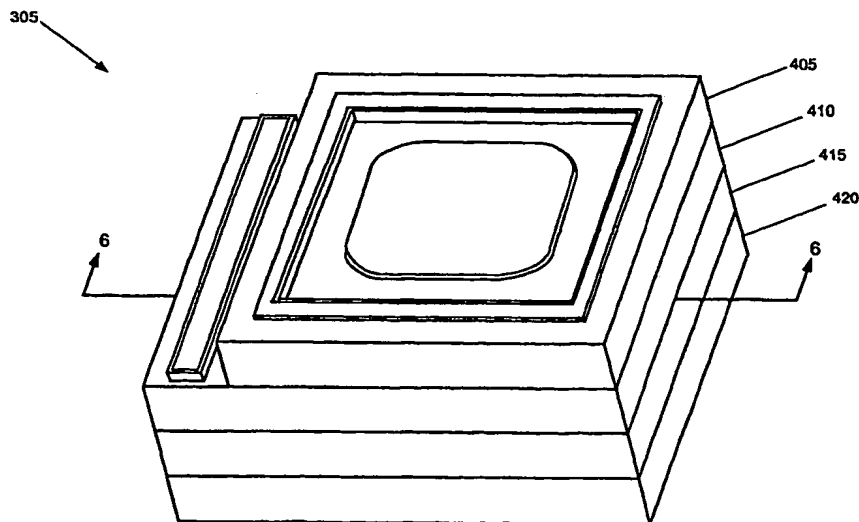




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(54) Title: **SENSOR DESIGN AND PROCESS**

(57) Abstract

An accelerometer (305) for measuring seismic data. The accelerometer (305) includes an integrated vent hole for use during a vacuum sealing process and a balanced metal pattern for reducing cap wafer bowing. The accelerometer (305) also includes a top cap press frame recess (405) and a bottom cap press frame recess (420) for isolating bonding pressures to specified regions of the accelerometer (305). The accelerometer (305) is vacuum-sealed and includes a balanced metal pattern (730) to prevent degradation of the performance of the accelerometer (305). A dicing process is performed on the accelerometer (305) to isolate the electrical leads of the accelerometer (305). The accelerometer (305) further includes overshock protection bumpers (720) and patterned metal electrodes to reduce stiction during the operation of the accelerometer (305).